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WATER SUPPLY OUTLOOK FOR WESTERN UNITED STATES

Including Columbia River Drainage in Canada



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U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with
CALIFORNIA DEPARTMENT of WATER RESOURCES
and
BRITISH COLUMBIA DEPARTMENT of
LANDS, FORESTS and WATER RESOURCES

AS OF
MAY 1, 1976

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SURVEYOR ENROUTE TO THE MT. BALDY ARIZONA SNOW COURSE
SCS PHOTO AZ-5460

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR WESTERN UNITED STATES

Including Columbia River Drainage in Canada

ISSUED

MAY 1, 1976

The Soil Conservation Service coordinates snow surveys conducted by its staff and many cooperators, including the Bureau of Reclamation, Corps of Engineers, Forest Service, National Park Service, NOAA, National Weather Service, Geological Survey, and other Federal Agencies, Departments of State Government, Irrigation Districts, Power Companies, and others.

The Department of Water Resources coordinates snow surveys in California.

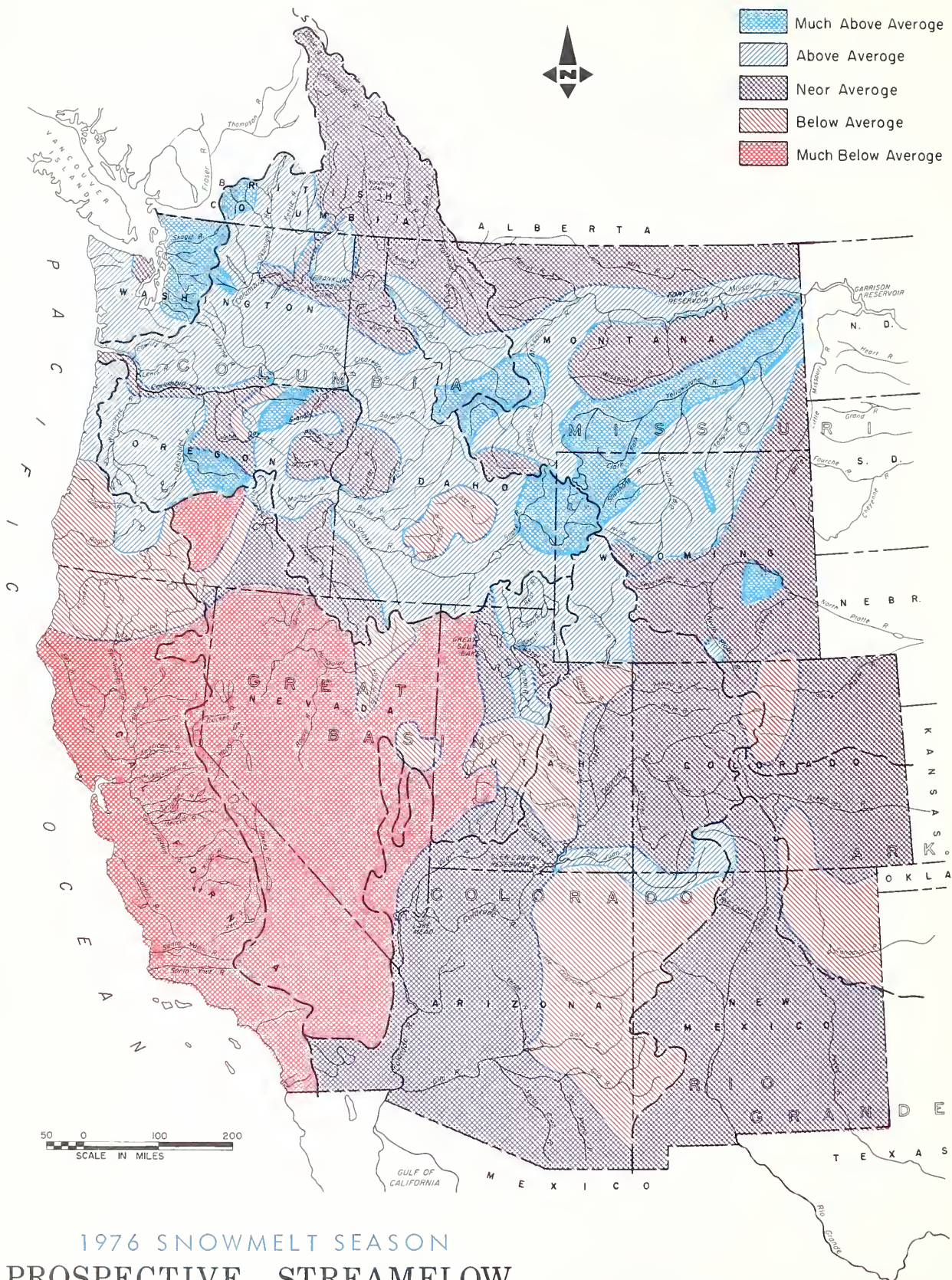
The Water Resources Service, Department of Lands, Forests, and Water Resources directs snow surveys in British Columbia.

This report was prepared by the Water Supply Forecasting Unit, Engineering Division, Soil Conservation Service, from data supplied by Snow Survey Supervisors of the Soil Conservation Service in the States of Alaska, Arizona, Colorado and New Mexico, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

Data from California was supplied by the Chief, Water Supply Forecast and Snow Survey Unit, Department of Water Resources.

Data from British Columbia was supplied by the Chief, Hydrology Division, Water Investigations Branch, Department of Lands, Forests and Water Resources.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
R.M. DAVIS, ADMINISTRATOR



1976 SNOWMELT SEASON
PROSPECTIVE STREAMFLOW
AS OF MAY 1, 1976

WATER SUPPLY OUTLOOK

1976 SNOWMELT SEASON
MAY 1, 1976

NEAR RECORD LOW FLOWS ARE EXPECTED FROM SIERRA NEVADA STREAMS IN BOTH NEVADA AND CALIFORNIA. EXCELLENT SUPPLIES ARE FORECAST FOR MUCH OF THE PACIFIC NORTHWEST AND NORTHERN ROCKIES.

Winter-long drought conditions have resulted in very poor snowpack conditions over the Sierra-Nevada mountain range. Irrigation water users should prepare for spring and summer river flows that will be as low as any on record. Minimum flows, as low as those experienced in the Central Valley of California in 1924, are expected this year.

There is sufficient reservoir water available to offset the lack of river supplies in much of the area. However, those irrigators in California and Nevada who are dependent on direct diversion from Sierra-Nevada rivers are facing an extremely dry year.

A much brighter outlook is reported from the Pacific Northwest and Northern Rocky Mountain regions. The snowpack over northwest Wyoming is nearly twice the usual level, and irrigation water prospects are excellent down the entire Yellowstone River. Conditions are also good to excellent over much of Idaho, Washington and Oregon.

A heavy mid-April storm over much of Arizona boosted runoff for the month to nearly twice the normal rate. The Gila, Verde, and lower Colorado will all deliver near average quantities for water users. However, the Little Colorado and Salt Rivers will yield from 10 to 25 percent less than their normal quantities. Reservoir storage in central Arizona remains near average except for San Carlos, which contains only one-third of its normal amount.

Snowmelt runoff is forecast to be near to slightly below normal over much of Colorado, Utah and southern Wyoming. Some areas of short supply can be expected in southern Utah and along the smaller tributaries of the Rio Grande River in New Mexico.

Reservoir storage is adequate to excellent. The supplemental irrigation

supplies now impounded and available for release to downstream users will help ease the forecast shortages in several regions. Best carryover storage conditions are found in the Columbia River Basin as well as along the Missouri and Platte drainages. The poorest conditions prevail in the Arkansas watershed in Colorado. Some mid and late season shortages should be expected in the Arkansas valley due to the expected river discharge of 10 percent below normal and the lack of reservoir water.

Spring "breakup" came to the interior of Alaska about 10 days ahead of normal, as a result of dry warm weather in April. Along the panhandle of southeast Alaska one of the heaviest snowpacks in recent years was observed by survey crews on May 1.

MISSOURI BASIN

The outlook for irrigation water remains good to excellent throughout the entire basin. The snowpack continues to be very heavy on some watersheds. It is at least normal over most of the rest of the basin except for some northern Colorado tributaries. Reservoir storage continues to be excellent basin-wide and April rain-fall improved valley soil moisture conditions in eastern Colorado.

The snowpack in northern Wyoming and along the continental divide in Montana was increased by a heavy late April storm. Some low elevation areas had begun to melt by May 1. The pack was still accumulating at higher zones, however.

Above normal snowpacks are found in Montana on the Big Hole, Boulder, and Jefferson watersheds. Heavy accumulations also persist on northern Wyoming drainages. Snow conditions are near average over most of the North and South Platte drainages, except for an area of deficient accumulation in northern Colorado. Boulder and Clear Creeks and the St. Vrain River all continue to be short of snow.

SUMMARY OF SNOW WATER EQUIVALENT MEASUREMENTS

MAJOR BASIN AND SUB - WATERSHED	WATER EQUIVALENT IN PERCENT OF:		MAJOR BASIN AND SUB - WATERSHED	WATER EQUIVALENT IN PERCENT OF:	
	LAST YEAR	AVERAGE		LAST YEAR	AVERAGE
MISSOURI BASIN			SNAKE BASIN		
Jefferson	92	130	Snake above Jackson, Wyo.	118	141
Madison	95	128	Snake above Hiese, Idaho	-	-
Gallatin	95	114	Snake abv. American Falls Res.	87	130
Missouri Main Stem	87	120	Henry's Fork	91	122
Yellowstone	105	125	Southern Idaho Tributaries	78	130
Shoshone	98	170	Big and Little Wood	70	103
Wind	91	113	Boise	79	112
North Platte	91	102	Owyhee	5	95
South Platte	62	88	Payette	77	103
			Malheur	35	100
ARKANSAS BASIN			Weiser	-	-
Arkansas	49	79	Burnt	45	105
Cucharas-Purgatoire	5	16	Powder	70	115
			Salmon	81	107
RIO GRANDE BASIN			Grande Ronde	78	114
Rio Grande (Colo.)	59	126	Clearwater	93	102
Rio Grande abv. Otowi Bridge	-	-			
Pecos	-	-	LOWER COLUMBIA BASIN		
			Yakima	86	135
COLORADO BASIN			Umatilla	-	185
Green (Wyo.)	90	114	John Day	40	115
Yampa - White	62	89	Deschutes - Crooked	80	135
Duchesne	53	98	Hood	100	170
Price	76	76	Willamette	95	150
Upper Colorado	68	76	Lewis	116	172
Gunnison	55	93	Cowlitz	99	115
San Juan	70	127			
Dolores	28	80	PACIFIC COASTAL BASIN		
Virgin	74	117	Puget Sound	105	126
Gila	-	-	Olympic Peninsula	119	126
Salt	-	-	Umpqua - Rogue	75	160
			Klamath	55	130
GREAT BASIN			Trinity	50	80
Bear	81	116			
Logan	76	113	CALIFORNIA		
Ogden	56	107	CENTRAL VALLEY		
Weber	62	97	Upper Sacramento	45	75
Provo - Utah Lake	45	92	Feather	20	30
Jordan	58	101	Yuba	20	35
Sevier	52	93	American	15	25
Walker - Carson	14	21	Mokelumne	25	40
Tahoe - Truckee	19	31	Stanislaus	20	30
Humboldt	41	116	Tuolumne	20	30
Lake Co. (Oregon)	20	60	Merced	20	30
Harney Basin (Oregon)	30	120	San Joaquin	15	20
			Kings	20	25
UPPER COLUMBIA BASIN			Kaweah	20	25
Columbia (Canada)	105	117	Tule	-	0
Kootenai	84	105	Kern	10	10
Clark Fork	87	116			
Bitterroot	92	120	Data for California Watersheds supplied by Dept. of Water Resources, and for British Columbia Watersheds by Dept. of Lands, Forests and Water Resources.		
Flathead	84	99			
Spokane	93	97	Average is for 1958-72 period. California av- erages are for the period 1931-70. Based on Selected Snow Courses determined by Distri- bution within the Basin, Length of Record and Repetitive Monthly Measurement Schedules.		
Okanogan	82	113			
Methow	52	71			
Chelan	120	136			
Wenatchee	91	212			

Streamflow forecasts indicate that some Montana and Wyoming rivers will yield at rates well above normal, while the northern Colorado tributaries will be under the 15-year average.

The Big Hole River is forecast to discharge about 40 percent more than its normal flows. The mainstem of the Missouri, the Yellowstone, Bighorn, and several smaller Wyoming tributaries are all expected to exceed 130 percent of their average amounts.

Along the North Platte in central Wyoming, Deer Creek and adjoining streams will flow as much as twice their norm during the snowmelt period. The mainstem of the North Platte is forecast to yield 108 percent of its average, with the Encampment and Laramie Rivers in that same category.

South Platte River tributaries in northern Colorado are forecast to contribute from 10 to 30 percent less than normal during the snowmelt runoff period. Clear Creek is expected to yield 70 percent of its usual amount. The Big Thompson and St. Vrain will add 80 percent of their normal and the Cache La Poudre, 90 percent.

Reservoir storage in the South Platte Basin is good and will offset most of the snowmelt runoff deficiencies. Impoundments in Wyoming and Montana are also excellent, with many reservoirs holding much above average amounts.

ARKANSAS BASIN

The combined effects of warm temperatures and few snow storms have resulted in lowered forecasts of snowmelt runoff in the Arkansas basin. The water supply outlook has been revised downward accordingly.

Low and mid elevation snowmelt began earlier than normal so the remaining snowpack is below the May 1 average. The mainstem of the Arkansas has about 20 percent less snow than normal. The Cucharas and Purgatoire watersheds have lost most of their snow, however. Only about 15 percent of the usual May 1 amount remains.

Streamflow is expected to fall about 10 percent short of normal in the Arkansas River at Salida. The Cucharas and Purgatoire Rivers are now forecast to yield 20 percent below average.

Reservoir storage is still much below normal, and there will not be much supplemental water available. John Martin reservoir now has no irrigation water stored, while Conchas contains only half

its normal supply. Users will be almost completely dependent upon direct flows from the rivers for their water supply.

RIO GRANDE BASIN

Prospects for irrigation water in the Rio Grande Basin remain very near the 15-year average. Users diverting from the mainstem of the Rio Grande should receive normal quantities. However, some tributaries in New Mexico will yield amounts below their 15-year average.

The snowpack on the headwaters in Colorado is about 25 percent heavier than the May 1 normal. Cool weather during April retarded snowmelt. All streams should yield above average quantities during the coming summer. The Rio Grande is forecast to flow at 112 percent of normal and the Conejos at 109 percent.

Downstream in New Mexico the snowpack is rapidly melting. Small tributaries to the Rio Grande will fall from 10 to 20 percent short of their long term averages. Water supplies may be insufficient to meet demand in these regions. The Rio Grande will provide near average amounts, due mostly to the heavy snowpack upstream in Colorado.

Reservoir storage is generally much above normal. Elephant Butte contains 50 percent more than its usual on May 1. El Vado is also well above normal. These impoundments will provide excellent supplemental water to New Mexico water users.

COLORADO BASIN

Irrigation water supplies should be near the average of the past 15 years throughout most of the Colorado River Basin. Water users along some streams in Utah may face some late summer shortages. The Green River watershed in Wyoming remains covered with a heavy snowpack, and runoff from that area will be well above the norm.

An unseasonably heavy storm in mid-April increased runoff greatly in Arizona. The Verde and Tonto watersheds received as much as three inches of water at higher elevations. Above normal rainfall occurred on the Salt and Gila drainages as well. The storm will raise the spring runoff from the Verde and Tonto up to the "normal" category. However, the Little Colorado, Salt and Gila are still expected to yield short of their 15-year average amounts.

Reservoir storage remains near the normal mark in central Arizona, except for San Carlos which contains only one-third of

SELECTED STREAMFLOW FORECASTS MAY 1, 1976

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's Flow In (1,000 A.F.)
	Flow In (1,000 A.F.)	Percent of Average		
SASKATCHEWAN				
St. Mary near Babb, Montana <u>1/</u>	475	102	May-Sept.	
UPPER MISSOURI				
Beaverhead near Grant, Montana <u>2/</u>	107	101	May-Sept.	276
Big Hole near Melrose, Montana	950	143	May-Sept.	
Jefferson at Silver Star, Montana	-	-		
Madison near Grayling, Montana <u>3/</u>	535	126	May-Sept.	477
Gallatin near Gateway, Montana	620	122	May-Sept.	
Sun at Gibson Dam, Montana <u>4/</u>	600	108	May-Sept.	812
Belt near Monarch, Montana	135	117	May-Sept.	
Marias near Shelby, Montana <u>5/</u>	520	107	May-Sept.	1,123
Missouri near Landusky, Montana <u>6/</u>	5,200	125	May-Sept.	
near Williston, North Dakota <u>7/</u>	13,500	130	May-Sept.	
S. Fk. Musselshell above Martinsdale, Montana	48	108	May-Sept.	
Milk at Eastern Crossing, Montana	535	126	May-Sept.	477
Yellowstone at Yellowstone Lake Outlet, Wyo.	1,060	129	April-Sept.	844
at Corwin Springs, Montana	2,550	133	May-Sept.	2,096
at Miles City, Montana <u>8/</u>	7,700	130	May-Sept.	
Clarks Fork near Belfry, Montana	750	128	May-Sept.	
Shoshone below Buffalo Bill Res., Wyo. <u>9/</u>	1,100	133	April-Sept.	917
Wind near Dubois, Wyoming	138	135	April-Sept.	126
at Riverton, Wyoming <u>10/</u>	250	128	April-Sept.	731
below Boysen Res., Wyoming <u>11/</u>	1,200	119	April-Sept.	1,206
Bull Lake Creek near Lenore, Wyoming	196	108	April-Sept.	188
Little Popo Agie near Lander, Wyoming	49	103	April-Sept.	56
Tensleep near Tensleep, Wyoming	89	113	April-Sept.	
Medicine Lodge near Hyattville, Wyoming	28	132	April-Sept.	
Shell Creek near Shell, Wyoming	95	130	April-Sept.	93
Big Horn near St. Xavier, Montana <u>8/</u>	2,350	136	May-Sept.	2,366
Tongue near Dayton, Wyoming	140	124	April-Sept.	172
No. Fork Powder near Hazelton, Wyoming	14	140	April-Sept.	15
PLATTE				
North Platte near Sinclair, Wyoming	700	108	April-Sept.	789
Encampment near Encampment, Wyoming	160	113	April-Sept.	191
Deer Creek at Glenrock, Wyoming	48	182	March-July	44
Laramie Riv. & Pioneer Canal, nr Woods, Wyo. <u>12/</u>	140	110	April-Sept.	124
Big Thompson at Drake, Colorado <u>13/</u>	88	82	April-Sept.	
Clear at Golden, Colorado <u>14/</u>	90	71	April-Sept.	
St. Vrain at Lyons, Colorado <u>15/</u>	60	80	April-Sept.	
Cache LaPoudre near Fort Collins, Colorado <u>16/</u>	220	89	April-Sept.	
ARKANSAS				
Arkansas at Salida, Colorado <u>17/</u>	280	90	April-Sept.	
Cucharas near LaVeta, Colorado	8	80	April-Sept.	
Purgatoire at Trinidad, Colorado	30	80	April-Sept.	
RIO GRANDE				
Rio Grande near Del Norte, Colorado <u>18/</u>	525	112	April-Sept.	
at Otowi Bridge, New Mexico <u>19/</u>	600	114	April-Sept.	
Conejos near Mogote, Colorado <u>20/</u>	200	109	April-Sept.	
El Vado Res., Inflow, New Mexico	200	105	April-Sept.	
Pecos at Pecos, New Mexico	35	85	April-Sept.	
UPPER COLORADO				
Colorado, Grandby Res. Inflow, Colorado <u>21/</u>	200	88	April-Sept.	
near Dotsero, Colorado <u>22/</u>	1,300	91	April-Sept.	
near Cameo, Colorado <u>23/</u>	2,200	93	April-Sept.	
near Cisco, Utah <u>24/</u>	2,886	102	April-July	3,785
Lake Powell Inflow, Arizona <u>25/</u>	6,936	101	April-July	
Roaring Fork at Glenwood Springs, Colorado <u>26/</u>	710	100	April-Sept.	
Uncompahgre at Colona, Colorado	140	104	April-Sept.	
Gunnison, Blue Mesa Res. Inflow, Colorado <u>27/</u>	800	101	April-Sept.	
near Grand Junction, Colorado <u>28/</u>	1,190	100	April-Sept.	
Dolores at Dolores, Colorado	250	108	April-Sept.	

Forecasts in California provided by Department of Water Resources.
Average is for 1958-72 period except California. California is computed for 1921-70 period.
Forecasts assume average Effective Climate Conditions from Date Through Snow Melt Season.
Explanatory Notes on Forecasts listed on Inside Back Cover.

SELECTED STREAMFLOW FORECASTS

MAY 1, 1976

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's Flow In (1,000 A.F.)
	Flow In (1,000 A.F.)	Percent of Average		
UPPER COLORADO (continued)				
Green at Warren Bridge, Wyoming	395	121	April-Sept.	335
at Green River, Wyoming <u>29/</u>	1,290	130	April-Sept.	1,167
Flaming Gorge Res. Inflow, Utah <u>27/</u>	1,445	123	April-July	-
at Green River, Utah <u>30/</u>	2,742	97	April-July	3,823
Big Sandy near Big Sandy, Wyoming	63	111	April-Sept.	72
Yampa at Steamboat Springs, Colorado	230	84	April-Sept.	-
near Maybell, Colorado	770	85	April-Sept.	-
Little Snake near Dixon, Wyoming	295	98	April-Sept.	-
White near Meeker, Colorado	295	100	April-Sept.	-
Strawberry at Duchesne, Utah <u>40/</u>	41	89	May-July	59
Duchesne near Tabiona, Utah <u>31/</u>	75	80	May-July	-
at Randlett, Utah <u>40/</u>	160	80	May-July	-
Lakefork below Moon Lake, Utah <u>32/</u>	58	88	May-July	80
Uinta near Neola, Utah	66	80	May-July	96
Whiterocks near Whiterocks, Utah	43	77	May-July	78
Price, Scofield Res. Inflow, Utah <u>33/</u>	28	96	May-July	-
Cottonwood near Orangeville, Utah <u>34/</u>	29	67	May-July	-
San Juan, Navajo Res. Inflow, New Mexico <u>27/</u>	680	114	April-July	-
near Bluff, Utah <u>35/</u>	983	115	April-July	-
Animas at Durango, Colorado	450	106	April-Sept.	-
LOWER COLORADO				
Virgin near Virgin, Utah	26	93	May-June	34
Little Colorado above Lyman, Arizona	-	-		-
Gila near Solomon, Arizona	-	-		-
Frisco at Clifton, Arizona	-	-		-
Salt at Intake, Arizona	-	-		-
Tonto above Roosevelt, Arizona	-	-		-
Verde above Horseshoe Dam, Arizona	-	-		-
GREAT BASIN				
Bear at Utah-Wyo. State Line	116	109	May-July	137
at Harer, Idaho	287	121	May-July	-
Smith's Fork near Border, Wyoming	126	109	April-Sept.	134
Thomas Fork near Wyo.-Ida. State Line	37	115	April-Sept.	42
Logan near Logan, Utah <u>36/</u>	118	120	May-July	132
Ogden, Pine View Res. Inflow, Utah <u>27/</u>	90	141	May-June	154
Weber near Oakley, Utah	87	96	May-June	100
Provo near Hailstone, Utah <u>37/</u>	83	92	May-July	146
Strawberry Res. Inflow, Utah	30	86	May-July	77
Utah Lake Net Inflow, Utah	150	105	May-July	-
Big Cottonwood near Salt Lake City, Utah	34	110	May-July	-
Beaver near Beaver, Utah	10	56	May-July	17
Sevier near Hatch, Utah	32	94	May-July	32
near Gunnison, Utah	22	79	May-July	45
So. Fork Humboldt near Elko, Nevada	40	70	May-July	-
Humboldt at Palisades, Nevada	97	65	May-July	-
Truckee at Farad, California <u>38/</u>	75	38	May-July	-
East Carson near Gardnerville, Nevada	65	43	May-July	-
West Carson at Woodsfords, California	18	44	May-July	-
East Walker near Bridgeport, California <u>39/</u>	16	27	May-July	-
West Walker near Coleville, California	55	43	May-July	-
Donner and Blitzen near Frenchglen, Oregon	40	106	May-July	-
Silvies near Burns, Oregon	38	115	May-July	95
Chewaucan near Paisley, Oregon	34	60	May-July	82
Deep above Adel, Oregon	34	79	May-July	-
Bidwell near Ft. Bidwell, California	7	78	May-July	-
Owens below Long Valley Res., California	24	39	April-July	56
UPPER COLUMBIA				
Columbia at Birchbank, British Columbia <u>40/</u>	47,400	109	May-Sept.	39,322
at Grand Coulee, Washington <u>40/</u>	67,700	109	May-Sept.	62,306

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SELECTED STREAMFLOW FORECASTS

MAY 1, 1976

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's Flow In (1,000 A.F.)
	Flow In (1,000 A.F.)	Percent of Average		
UPPER COLUMBIA (continued)				
Columbia below Rock Island, Washington	75,400	111	May-Sept.	69,286
Kootenai below Libby Dam nr Libby, Montana	7,200	103	May-Sept.	6,127
at Leonia, Idaho	8,500	103	May-Sept.	7,691
Blackfoot near Bonner, Montana	1,170	129	May-Sept.	1,317
Sl.Fk. Flathead nr Columbia Falls, Montana <u>40/</u>	2,180	103	May-Sept.	2,445
Flathead at Columbia Falls, Montana <u>40/</u>	6,000	104	May-Sept.	6,630
near Polson, Montana <u>40/</u>	7,000	102	May-Sept.	7,645
Clark Fork above Missoula, Montana	2,090	132	May-Sept.	2,597
near Plains, Montana <u>40/</u>	12,300	110	May-Sept.	13,594
at Whitehorse Rapids, Idaho	13,600	110	May-Sept.	-
Bitterroot near Darby, Montana	700	132	May-Sept.	712
Priest near Priest River, Idaho <u>41/</u>	65	95	May-July	-
Pend Oreille below Box Canyon, Washington	15,100	110	May-Sept.	16,545
Kettle near Laurier, Washington	1,900	118	May-Sept.	1,747
Spokane at Post Falls, Idaho <u>42/</u>	2,160	106	May-Sept.	-
Similkameen near Nighthawk, Washington	1,938	136	May-Sept.	1,398
Okanogan near Tonasket, Washington	2,050	127	May-Sept.	1,464
Methow near Pateros, Washington	1,170	124	May-Sept.	-
Stehekin at Stehekin, Washington	1,050	127	May-Sept.	-
Chelan at Chelan, Washington <u>43/</u>	1,470	129	May-Sept.	1,295
Wenatchee at Peshastin, Washington	2,200	139	May-Sept.	1,805
SNAKE				
Snake above Palisades Res., Wyoming <u>44/</u>	3,480	133	April-Sept.	2,834
near Heise, Idaho <u>45/</u>	4,900	128	May-Sept.	-
near Blackfoot, Idaho <u>46/</u>	5,180	136	May-July	-
at Weiser, Idaho	6,040	119	May-Sept.	-
Grey's above Palisade, Wyoming	496	128	April-Sept.	424
Salt above Palisade, Wyoming	437	120	April-Sept.	524
Henry's Fork near Ashton, Idaho <u>47/</u>	735	129	May-Sept.	-
Teton near St. Anthony, Idaho	550	138	May-Sept.	-
Big Lost near Mackay, Idaho <u>48/</u>	135	80	May-Sept.	-
Little Lost near Howe, Idaho	33	93	May-Sept.	-
Portneuf at Topaz, Idaho	80	121	May-Sept.	-
Oakley Res. Inflow, Idaho	23	125	May-Sept.	-
Salmon Falls Creek nr San Jacinto, Idaho	70	130	May-Sept.	-
Little Wood above High 5 Crks, Idaho	60	82	May-Sept.	-
Big Wood, Inflow to Magic Res., Idaho <u>49/</u>	185	89	May-Sept.	-
Bruneau near Hot Springs, Idaho	200	123	May-Sept.	-
Boise near Boise, Idaho <u>50/</u>	1,400	110	May-Sept.	-
Owyhee near Owyhee, Nevada <u>51/</u>	41	100	May-July	-
Owyhee Res. Net Inflow, Oregon <u>27/</u>	170	108	May-July	636
Malheur near Drewsey, Oregon	37	115	May-July	-
Payette near Horseshoe Bend, Idaho <u>52/</u>	1,750	114	May-Sept.	-
Weiser above Crane Creek, Idaho <u>40/</u>	285	104	May-Sept.	-
Burnt near Hereford, Oregon <u>40/</u>	15	100	May-July	-
Powder near Sumpter, Oregon	37	92	May-July	-
Eagle above Skull Creek, Oregon	158	104	May-July	-
Imnaha at Imnaha, Oregon	246	97	May-Sept.	-
Salmon at Whitebird, Idaho	7,000	111	May-Sept.	-
Lostine near Lostine, Oregon	130	111	May-Sept.	-
Grande Ronde at LaGrande, Oregon	95	103	May-July	-
Clearwater at Spalding, Idaho	7,930	115	May-Sept.	-
LOWER COLUMBIA				
Yakima at Cleelum, Washington <u>53/</u>	900	113	May-Sept.	1,020
near Parker, Washington <u>54/</u>	1,700	128	May-Sept.	-
Naches near Naches, Washington <u>55/</u>	930	124	May-Sept.	959
Walla Walla, So. Fork near Milton, Oregon	58	116	May-Sept.	-
Umatilla at Pendleton, Oregon	85	125	May-July	-
John Day, Middle Fork at Ritter, Oregon	78	115	May-July	-
North Fork at Monument, Oregon	358	105	May-July	-

Forecasts in California provided by Department of Water Resources.
Average is for 1958-72 period except California. California is computed for 1921-70 period.
Forecasts assume average Effective Climate Conditions from Date Through Snow Melt Season.
Explanatory Notes on Forecasts listed on Inside Back Cover.

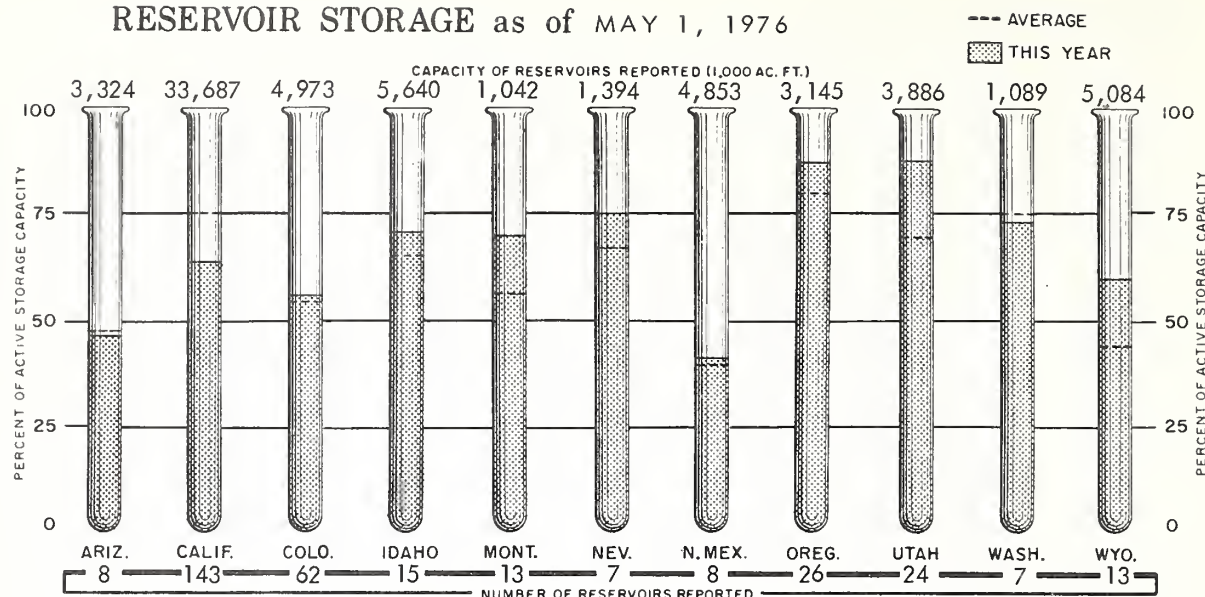
SELECTED STREAMFLOW FORECASTS

MAY 1, 1976

STREAM AND STATION	FORECASTS THIS YEAR		Forecast Period	Last Year's Flow In (1,000 A.F.)
	Flow In (1,000 A.F.)	Percent of Average		
LOWER COLUMBIA (continued)				
Crooked near Post, Oregon	38	115	May-July	
Deschutes at Benham Falls, Oregon 40/	307	109	May-July	
Columbia at The Dalles, Oregon 40/	66,700	111	May-June	62,891
at The Dalles, Oregon 40/	83,000	108	May-July	84,141
at The Dalles, Oregon 40/	99,800	109	May-Sept.	98,825
McKenzie near Vida, Oregon	880	120	May-July	
Santiam, South, at Waterloo, Oregon	400	124	May-July	
North, at Mehama, Oregon 40/	640	130	May-July	
Clackamas at Estacada, Oregon	492	110	May-July	
Willamette at Salem, Oregon 40/	3,382	129	May-July	
Lewis at Ariel, Washington 56/	1,110	119	May-Sept.	477
Cowlitz at Castle Rock, Washington 57/	2,330	111	May-Sept.	2,318
NORTH PACIFIC COASTAL				
Dungeness near Sequim, Washington	160	109	May-Sept.	
Umpqua, No., near Toketee Falls, Oregon 40/	154	111	May-Sept.	
Rogue at Raygold, Oregon	542	110	May-July	767
Klamath Lake, Net Inflow, Oregon	328	93	May-Sept.	529
Trinity at Lewiston, California	430	70	April-July	895
CALIFORNIA CENTRAL VALLEY 40/				
Sacramento, Inflow to Shasta, California	1,370	77	April-July	2,369
Feather near Oroville, California	610	33	April-July	2,634
Yuba at Smartville, California	245	23	April-July	1,378
American, Inflow to Folsom Res., California	245	19	April-July	1,648
Cosumnes at Michigan Bar, California	20	15	April-July	191
Mokelumne, Inflow to Pardee Res., California	120	26	April-July	605
Stanislaus, Inflow to Melones Res., California	140	20	April-July	932
Tuolumne, Inflow to Don Pedro Res., California	345	28	April-July	1,490
Merced, Inflow to Exchequer Res., California	170	28	April-July	817
San Joaquin, Inflow to Millerton Lake, Calif.	335	28	April-July	1,413
Kings, Inflow to Pine Flat Res., California	375	32	April-July	1,266
Kaweah, Inflow to Terminus Res., California	80	30	April-July	296
Tule, Inflow to Success Res., California	12	20	April-July	67
Kern, Inflow to Isabella Res., California	110	26	April-July	368
ALASKA				
Yukon at Eagle, Alaska	27,500	80	April-July	44,523
at Ruby, Alaska	51,000	76	April-July	66,991
Porcupine near Fort Yukon, Alaska	5,500	77	April-July	
Salcha near Salchaket, Alaska	480	60	April-July	706
Little Chena near Fairbanks, Alaska	60	64	April-July	76
Chena at Fairbanks, Alaska	360	64	April-July	505
Ship Creek near Anchorage, Alaska	62	105	April-July	58
So.Fk.Campbell at Canyon Mouth nr Anchorage, AK	15	111	April-July	14

Forecasts in California provided by Department of Water Resources.
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Explanatory Notes on Forecasts listed on Inside Back Cover.

RESERVOIR STORAGE as of MAY 1, 1976



its average, and Lake Pleasant which holds three-fourths its May 1 normal.

Upstream in Utah the streamflow forecasts indicate that supplies will be fair to good along most Colorado tributaries.

Cottonwood Creek is expected to yield 67 percent of its average. Most other streams draining into the Green-Colorado will flow at from 80 to 90 percent of normal. Among the streams included in this category are the Uinta, Lakefork, Duchesne and Strawberry.

The Green River is forecast to discharge 23 percent more than normal into Flaming Gorge reservoir, but is expected to flow at a rate near its average at Green River, Utah. The Yampa will contribute about 85 percent of its usual amount, while snowmelt runoff from the White River will be near the 15-year normal.

The mainstem of the Colorado is predicted to fall about 9 percent short of its average flow at Dotsero and 7 percent short at Cameo, Colorado. Downstream at Cisco, Utah it is forecast to flow at 102 percent of normal. Its yield into Lake Powell is anticipated to be within about 1 percent of average.

Reservoir storage is excellent. Both Flaming Gorge and Lake Powell currently hold more than twice their normal amount for this date, while Lake Mead is 19 percent above its normal mark. The Salt River project reservoirs are slightly more full than normal, while the Verde River reservoirs are 6 percent short of their May 1 average. San Carlos is the major exception to the bright reservoir picture. It is much below normal,

currently impounding but 35 percent of its average.

GREAT BASIN

A wide range of conditions are found within the Great Basin. Water supplies are expected to be critically short in much of Nevada, while excellent supplies are predicted for some portions of Utah. Most reservoirs still contain normal or above quantities, however, and will help ease the expected shortages in some localities.

Streamflow will be very low from all streams heading in the Sierra Nevada. The latest snow surveys indicate that this mountain range currently has one of the lightest snowpacks on record. On the Walker River the pack currently is only 10 percent of the normal buildup. The Truckee watershed has but one-third of its usual snowpack. If the dry weather pattern continues the river flows will probably be as low as those experienced in 1924 and 1934.

To the east the upper Humboldt and Snake watersheds have snowpacks more near the May 1 normal accumulations. Streamflow forecasts indicate the Snake will yield slightly more than its average. The upper Humboldt will flow at about 88 percent of normal, while the discharge from the lower reaches of the river will be about one-half of average.

Most Nevada reservoirs are holding near average quantities. Water users who receive supplemental stored water may not be so severely impacted by the lack of river runoff. Lake Tahoe stands at 98

STORAGE IN LARGE RESERVOIRS

BASIN AND NAME OF RESERVOIR	CAPACITY (1,000 A.F.)	STORAGE (1,000 A.F.)	STORAGE PERCENT AVERAGE	BASIN AND NAME OF RESERVOIR	CAPACITY (1,000 A.F.)	STORAGE (1,000 A.F.)	STORAGE PERCENT AVERAGE
UPPER MISSOURI				UPPER COLUMBIA			
Belle Fourche	185	136	103	Chelan	676	367	163
Boysen	550	156	84	Coeur d'Alene	225	237	97
Buffalo Bill	373	125	104	Duncan	1,400	165	222
Canyon Ferry	2,043	1,449	93	Flathead	1,791	1,067	109
Fort Peck	19,140	17,440	129	Hungry Horse	3,428	2,031	101
Garrison	24,790	19,939	136	Kootenay	787	306	97
Hebgen	377	196	92	Lake Koocanusa	5,694	1,359	-
Keyhole	192	131	160	Lower Arrow	2,691	947	1,100
Lake Francis Case	5,816	3,908	94	Noxon Rapids	335	262	190
Lake Sharp	1,900	1,703	99	Pend Oreille	1,155	467	87
Oahe	23,630	19,002	113	Roosevelt	5,232	659	40
Tiber	1,347	546	89	Upper Arrow	4,400	1,267	328
Bighorn Lake	1,356	771	98	LOWER COLUMBIA			
PLATTE				Cougar	155	132	121
So. Platte in Colo(28)	1,033	844	101	Detroit	300	221	88
City of Denver (7)	622	455	99	Green Peter	270	217	109
Colo-Big Thompson (3)	718	507	118	Hills Creek	200	153	97
Glendo	784	499	110	Lookout Point	337	226	88
Pathfinder	1,016	880	214	Prineville	153	153	105
Seminole	1,010	575	183	Wickiup	200	200	106
ARKANSAS				Yakima Res. (5)	1,066	776	97
Conchas	273	81	46	SNAKE			
John Martin	354	0	-	American Falls	1,125	1,177	108
Turquoise	-	-	-	Anderson Ranch	423	325	115
RIO GRANDE				Arrowrock	287	197	85
Elephant Butte	2,195	576	152	Brownlee	980	552	160
New Mexico Res. (4)	578	225	183	Cascade	653	354	100
UPPER COLORADO				Dworshak	2,016	240	69
Blue Mesa	830	431	140	Jackson	847	500	100
Flaming Gorge	3,749	3,351	206	Lucky Peak	278	171	120
Navajo	1,696	1,122	-	Owyhee	715	694	123
Powell	25,002	19,664	235	Palisades	1,200	174	22
Starvation	165	141	-	Warm Springs	191	174	124
LOWER COLORADO				PACIFIC COASTAL			
Havasu	619	594	100	Clair Eagle	2,448	1,956	87
Mead	26,159	20,102	119	Clear Lake	440	300	113
Mohave	1,810	1,642	97	Nacimiento	350	180	79
Salt River Res. (4)	1,755	1,222	104	Ross	1,404	743	99
San Carlos	1,093	68	35	Upper Klamath	584	468	90
Verde River Res. (2)	318	155	94	CALIFORNIA CENTRAL VALLEY			
GREAT BASIN				Almanor	1,308	582	69
Bear	1,421	1,137	109	Berryessa	1,602	1,278	81
Deer Creek	150	104	101	Bullards Bar	961	388	56
Lahontan	291	221	101	Folsom	1,010	636	86
Rye Patch	157	163	152	Isabella	570	156	75
Sevier Bridge	236	188	165	McClure	1,026	575	88
Strawberry	270	258	199	Millerton	521	381	105
Tahoe	732	471	98	Orville	3,538	2,752	90
Utah	884	948	142	Pine Flat	1,002	547	82
Willard Bay	193	172	106	Shasta	4,552	3,014	69

Reservoir Storage Data Provided by Bureau of Reclamation, Corps of Engineers, Geological Survey and water using organizations. Data from California and British Columbia provided by Department of Water Resources and Department of Lands, Forests and Water Resources, respectively.

percent of average. The quantities in Lahontan, Topaz and Bridgport range from 100 to 117 percent of normal. Rye Patch and Wild Horse reservoirs are near capacity.

The drought conditions in Nevada extend into portions of Oregon as well. The Chewaucan River is forecast to discharge at a rate 40 percent below the 15-year average. Conditions on the Donner und Biltzen and Silvies watersheds are more nearly normal, and forecasts call for 6 and 15 percent above average flows, respectively, from these streams.

The Utah portion of the basin also is highly variable. Much above normal irrigation water supplies are expected from the Ogden River, while above average yields are predicted from the Bear and Logan drainages.

Further south the outlook along the lower Beaver is poor with about one-half the normal streamflow expected. Water supplies are also anticipated to be well below normal from the upper Beaver and lower Sevier.

Reservoir storage is good to excellent in this region. Sevier Bridge currently holds 65 percent more than its average, and Strawberry has about double its usual quantity. Utah Lake is holding 42 percent more than its May 1 norm. Direct flow shortages will be offset, at least in part, by these supplemental reservoir supplies.

COLUMBIA BASIN

Water supplies are anticipated to be normal to better than average throughout nearly all of the Columbia River Basin. Some rivers heading in the Washington and Oregon Cascades will flow at much above normal rates. Similarly large volumes are expected from the upper Snake River in Wyoming. About the only area of sub-normal snowmelt runoff is in central Idaho.

The British Columbia Department of Lands, Forest and Water Resources reports that on the headwaters of the Columbia the snowpack remains from 10 to 17 percent above normal. Runoff is forecast to be 9 percent above the 15-year average at the Canadian border.

Some tributaries heading in Montana received a very heavy snowfall late in April. The winter-long accumulation is above normal on the Clark Fork and Bit-

terroot, and near average on the Flathead and Kootenai.

High flows can be expected from the Bitterroot and upper Clark Fork, and stream channel degradation should be expected. Near average yields are forecast from the lower reaches of these rivers as well as the Flathead, Kootenai and Blackfoot.

In Washington several drainages flowing into the Columbia from the Cascades have very heavy snowpacks. Runoff is forecast to be well above normal from the Wenatchee, Chelan, Similkameen, and most other rivers in the region.

The Snake River portion of the basin is forecast to contribute above normal snowmelt runoff. The snowpack in Wyoming on the headwaters of the Snake is about twice the May 1 normal. This is due to a combination of cool temperatures which have slowed melt, and added snowfall during April. Inflow from the Snake into Palisades reservoir is forecast to be one-third higher than average. Most southern Idaho tributaries are expected to contribute 20 to 25 percent above normal flows to the Snake.

The Big Wood-Big Lost Rivers area of central Idaho remain about the only drainages with sub-normal snowpacks and stream-flow forecasts below average. Streams in this vicinity are predicted to yield from 10 to 20 percent less than their average.

Most western and northern Idaho rivers are forecast to flow at rates from 5 to 15 percent above their 15-year averages.

Eastern and northern Oregon rivers are also expected to yield snowmelt runoff of from 5 to 15 percent above average. The major exception is the Umatilla at Pendleton which is now forecast to discharge 25 percent more than its norm.

Lower Columbia tributary rivers flowing from the Oregon and southern Washington Cascades will contribute above normal flows. The Cowlitz and Lewis Rivers are predicted to yield 11 to 19 percent above normal flows. The Willamette and North Santiam in Oregon are expected to be nearer 30 percent above normal.

Reservoir storage throughout the basin is excellent. Nearly all are full or expected to fill during the snowmelt runoff season. Many have been drawn down in anticipation of the above normal runoff.

CALIFORNIA

The California Department of Water Resources, coordinating agency for snow surveys and water supply forecasting in California, reports that the state is experiencing a dry year that will be among the lowest of record. Rainfall amounts and mountain snowpack are well below normal, especially in central California. New record low runoff amounts for the April through July period are expected on the American, Mokelumne, Stanislaus, Tuolumne, and Merced Rivers.

Forecasts of April through July runoff range from a low of only 15 percent of normal on the Cosumnes River to a high of 75 percent for the inflow to Shasta Lake. Almost all streams south of the Feather River are forecasted to produce about one-third normal runoff for the April through July period.

Snowpack throughout the state is well below normal and in the Sierra watersheds are expected to complete the melting cycle in the next few weeks. May 1 snow surveys show that 68 of the 222 snow courses measured this month are already bare. Snow water content is only 40 percent of normal in the Sacramento Valley area and 25 percent of normal in the San Joaquin Valley area. NASA supplied satellite imagery indicates the effective snow line on May 1 averaged 8,300 feet (2 530 m), and that snowcovered area in the San Joaquin, Kings, Kaweah, Tule, and Kern River Basins was 2,000 square miles (5 200 km²) this year compared to 3,650 square miles (9 500 km²) of snowcovered area on May 1 last year.

Precipitation during April was above average at scattered locations throughout the state such as the west side of the Sacramento Valley, portions of the North Coast, the San Joaquin Valley floor, and the interior desert areas of southern California. The remainder of the state was below normal for the month. Water year precipitation, October 1 to date, has been far below normal throughout the state, except for the desert areas. In the Central Valley, precipitation has averaged about 50 percent of normal for the seven-month period.

Runoff during April was about 45 percent of normal, ranging from less than 10 percent of normal in San Francisco Bay Area streams to a high of 60 percent of normal for the North Coastal streams. In the Central Valley, runoff was 38 percent of normal with only the Sacramento River exceeding 50 percent of normal for the month. Water year runoff has averaged 45 percent of normal in the Central Valley and is not expected to exceed 50 percent of normal for this water year, except on the North Coast.

Reservoir storage was 85 percent of normal on May 1 in the 143 reservoirs monitored. In the Central Valley, storage on May 1 was 16,600,000 acre-feet (20.5 x 10⁹ cubic meters), same as on April 1, but down 3,800,000 acre-feet (4.7 x 10⁹ cubic meters) from last year. Both the State Water Project and the Central Valley Project are expected to meet contractual commitments this year.

ALASKA

Breakup in interior Alaska occurred a week to ten days earlier than normal. This is the result of scant additional moisture falling during April on an already lean snowpack coupled with warmer than usual temperatures.

Snowpack conditions vary from a low of about 30 percent of normal May 1 amounts on the Chena River to 50 percent above average in southeastern Alaska. The Copper Basin has about one-half its usual amount while the upper Susitna has three-fourths its normal. Anchorage area watersheds are in the range of 85 to 120 percent of average.

Streamflow forecasts through July have been revised downward. The Chena and Salcha Rivers are now expected to run 36 and 40 percent below normal respectively. This, however, is not quite as low as the recent low flow years of 1969, 1970, and 1974.

South coastal areas received near to a little above normal precipitation for April. The winter's snowpack in these regions remains above average. Ship Creek near Anchorage is expected to flow 5 percent above average through July.

Southeast Alaska watersheds are still burdened with extremely heavy snowpacks. Some areas are the heaviest for the twelve year period of record.



EXPLANATION of STREAMFLOW FORECASTS

All flows are observed flows except as adjusted for: 1/ Storage change in Lake Sherburne. 2/ Storage change in Lima and Clark Canyon reservoirs. 3/ Storage change in Hebgen Lake. 4/ Storage change in Gibson Reservoir and measured diversions. 5/ Storage change in Two Medicine, Four Horns, Lake Francis and Swift reservoirs. 6/ Storage change in Canyon Ferry and Tiber reservoirs. 7/ Changes as indicated in (6/), (8/), plus storage change in Fort Peck. 8/ Storage change in Boysen, Buffalo Bill, Bull Lake and Yellowtail reservoirs. 9/ Storage change in Buffalo Bill Reservoir plus Heart Mountain diversion. 10/ Storage change in Pilot Butte and Bull Lake reservoirs plus Wyoming canal diversion.

11/ Changes indicated in (10/) plus storage change in Boysen Reservoir. 12/ Plus diversions to Cache LaPoudre. 13/ Plus by-pass to power plants. 14/ Minus diversion thru Gumlick Tunnel. 15/ Storage change in Price Reservoir. 16/ Minus diversions from North Platte, Laramie and Colorado rivers plus measured diversions above station. 17/ Storage change in Clear Creek, Twin Lakes and Turquoise reservoirs minus diversions from Colorado River. 18/ Storage change in Rio Grande, Santa Maria and Continental reservoirs. 19/ Storage change in El Vado and Abiquiu reservoirs. 20/ Storage change in Platoro Reservoir.

21/ Storage change in Grandby Reservoir as furnished by U.S.B.R. plus diversions by Adams Tunnel and Grand River Ditch. 22/ Changes as indicated in (21/) plus diversions thru Roberts, Gumlick and Moffat tunnels and storage change in Dillon, Homestake, Williams Fork, Green Mountain and Willow Creek reservoirs. 23/ Changes indicated in (22/) and (26/). 24/ Storage change in Blue Mesa Reservoir. 25/ Changes indicated in (24/), (30/) and (35/) and storage change in Lake Powell. 26/ Diversions to Arkansas River plus storage change in Ruedi Reservoir. 27/ (Inflow record as computed by U. S. Bureau of Reclamation.) 28/ Storage change in Taylor, Blue Mesa and Morrow Point reservoirs. 29/ Storage change in Fontenelle Reservoir. 30/ Storage change in Flaming Gorge Reservoir.

31/ Plus diversion through Duchesne Tunnel. 32/ Storage change in Moon Lake Reservoir. 33/ Storage change in Scofield Reservoir. 34/ Storage change in Joe's Valley Reservoir. 35/ Storage change in Navajo Reservoir. 36/ Plus U. P. & L. Co. tailrace and Logan, Hyde Park and Smithfield canals. 37/ Minus diversions thru Duchesne Tunnel and Weber-Provo Canal. 38/ Storage change in Lake Tahoe and Boca reservoirs (Forecast by Truckee Basin Committee.) 39/ Storage change in Bridgeport Reservoir. 40/ Corrected for major upstream impairments -- represents simulated natural flow conditions.

41/ Storage change in Priest Lake. 42/ Storage change in Coeur d'Alene Lake and diversions by Spokane Valley Farms Co. and Rathrum Prairie canals. 43/ Storage change in Lake Chelan. 44/ Storage change in Jackson Lake. 45/ Storage change in Jackson Lake and Palisade reservoirs. 46/ Storage change in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake plus diversions between Heise and Blackfoot. 47/ Storage change in Henry's Lake and Island Park reservoirs. 48/ Storage change in MacKay Reservoir and diversion in Sharp Ditch. 49/ Combined flow Big Wood near Bellevue and Camas Creek near Blaine. 50/ Storage change in Arrowrock, Anderson Ranch and Lucky Peak reservoirs.

51/ Storage change in Wild Horse Reservoir. 52/ Storage change in Cascade and Deadwood reservoirs. 53/ Storage change in Keechelus, Kachess and CleElum reservoirs plus diversion by Kittitas Canal. 54/ Changes indicated in (52/) plus storage change in Bumping and Rimrock Lakes plus diversion by Roza, Union Gap, New Reservation, Old Reservation and Sunrise canals. 55/ Storage change in Bumping and Rimrock lakes and diversions by Tieton, Selah Valley, Wapatox canals and City of Yakima. 56/ Storage change in Merwin, Yale and Swift reservoirs. 57/ Storage change in Mayfield Reservoir.

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